OIPE JC68
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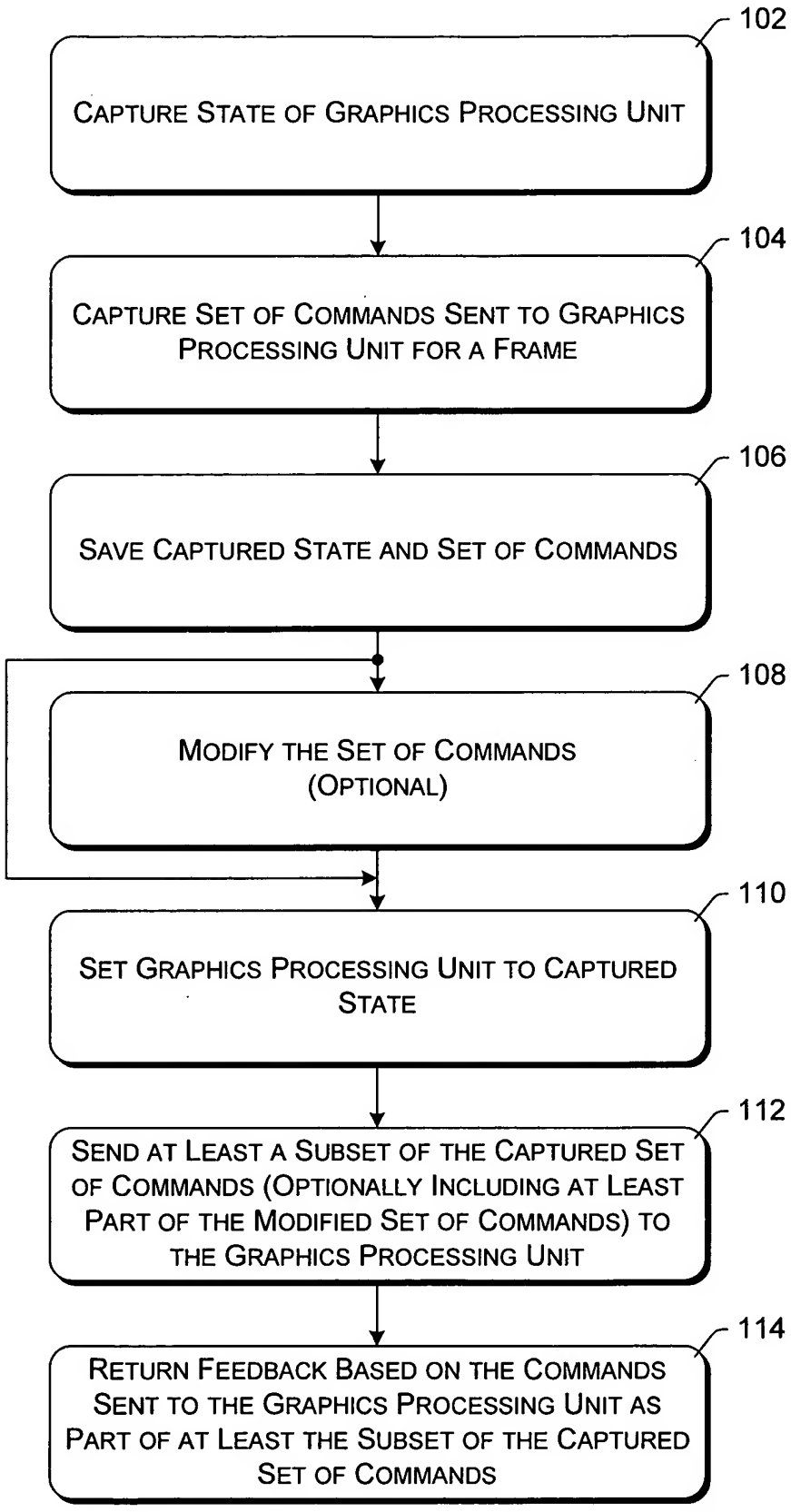

Fig. 1

OIPE
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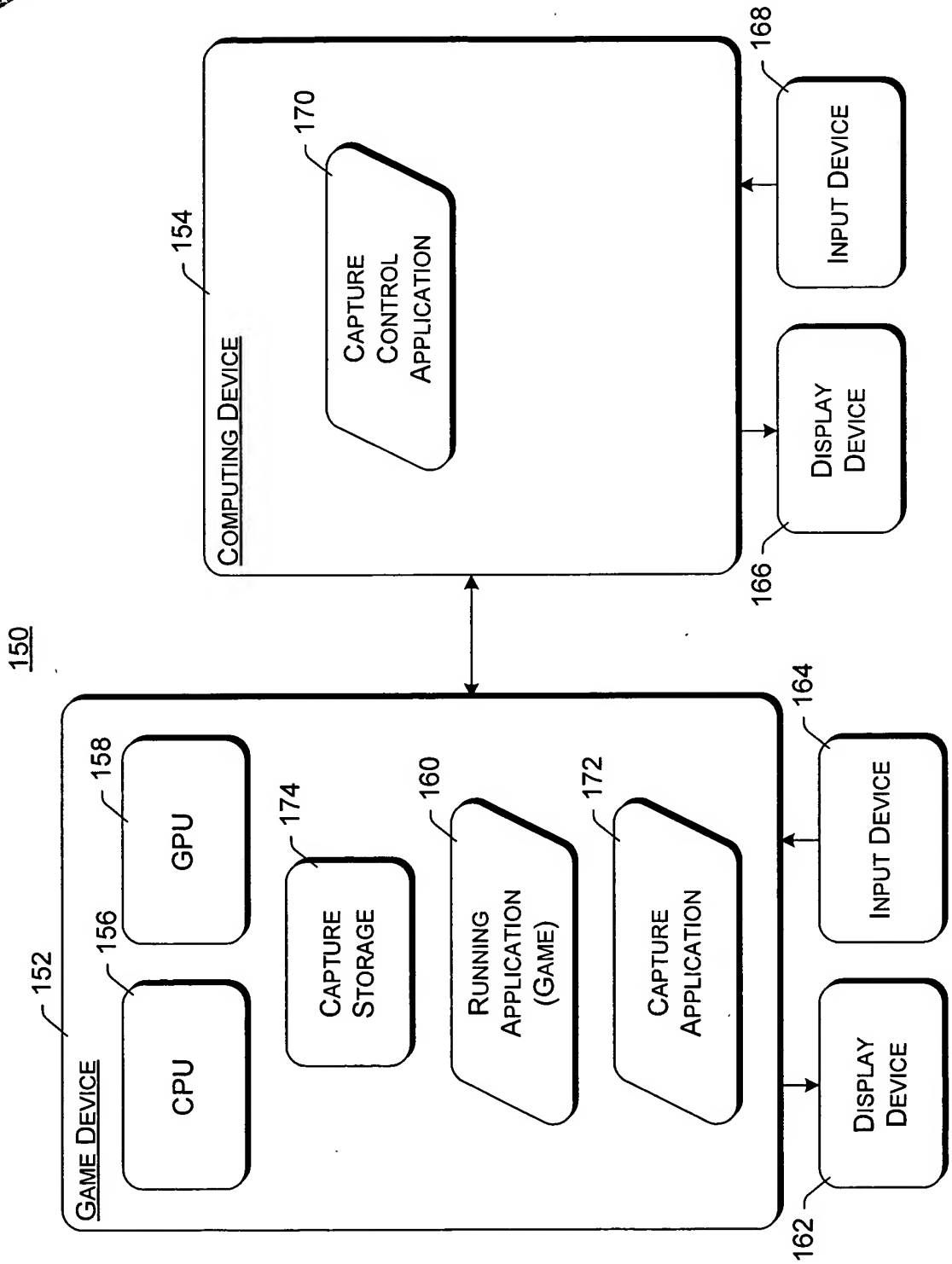

Fig. 2

OIPE JC66 FEB 19 20[illegible] PATENT & TRADEMARK OFFICE

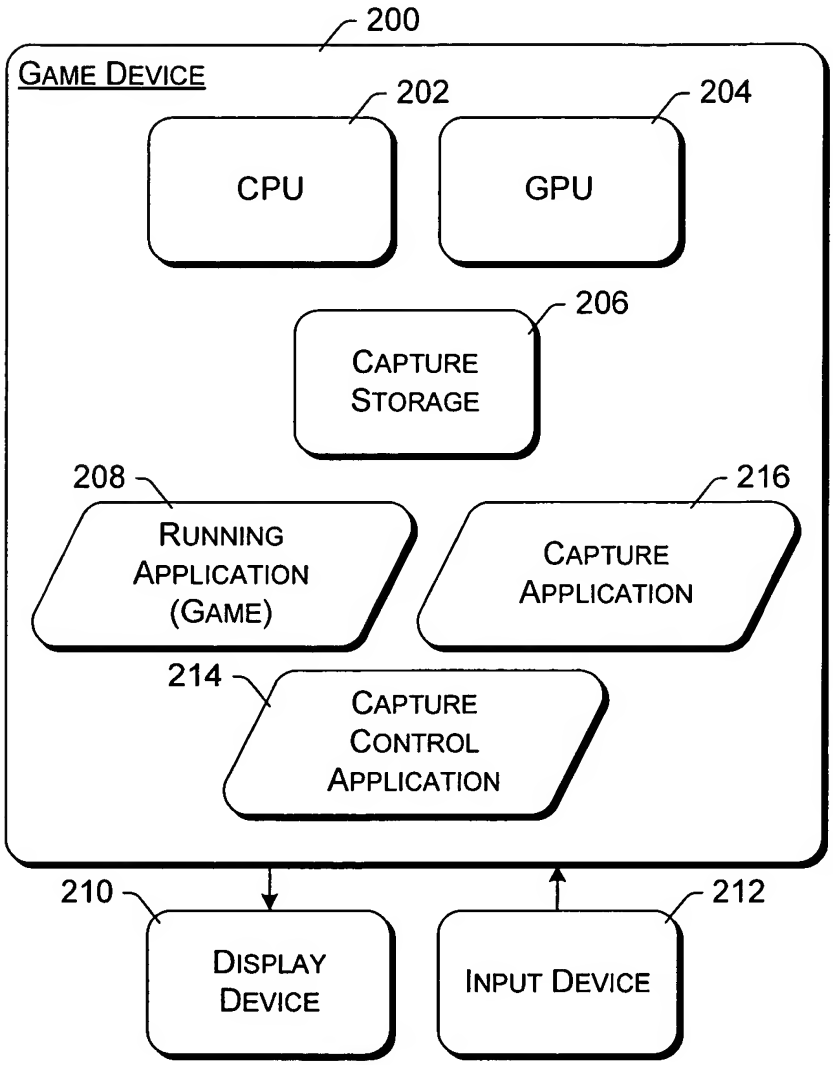

Fig. 3

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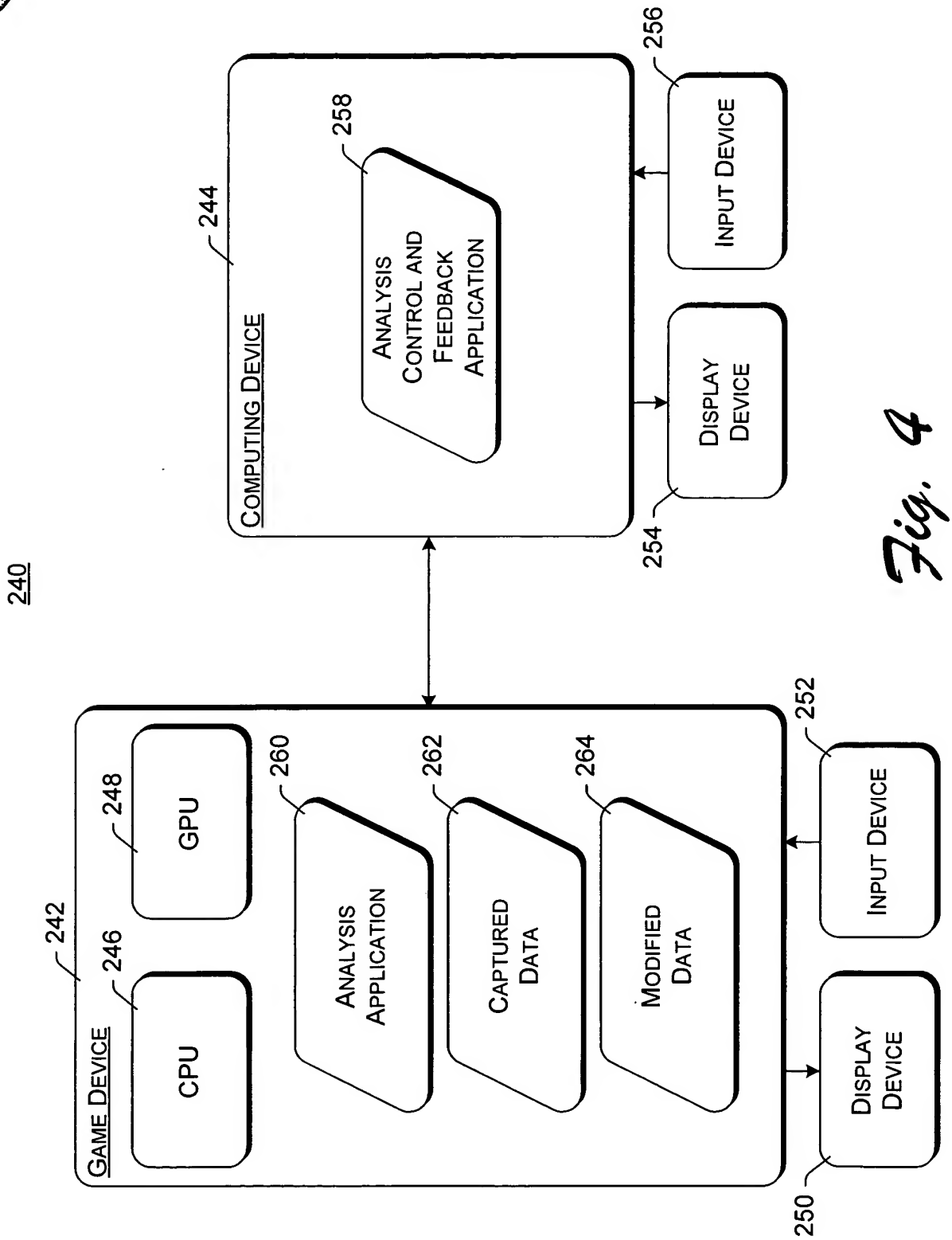

Fig. 4

OIPE JC66 FEB 19 2007 PATENT & TRADEMARK OFFICE

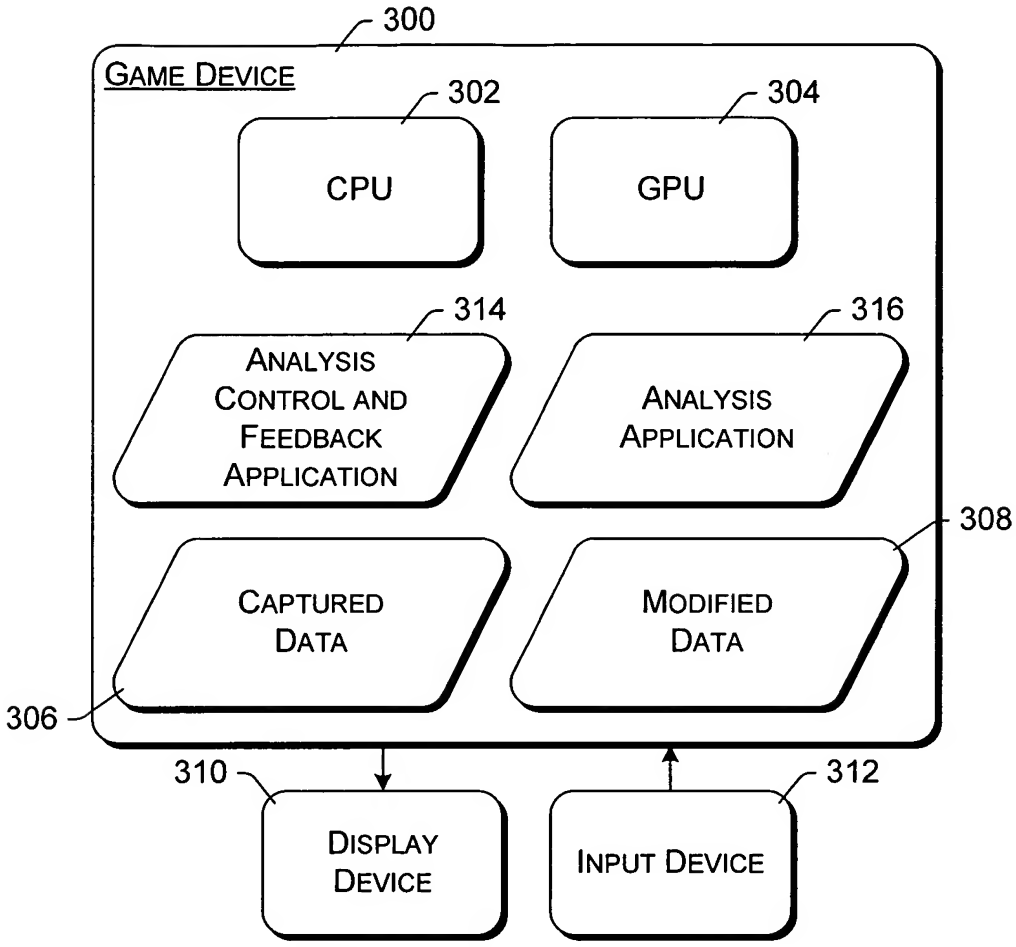

Fig. 5

OIPE JC66
FEB 19 2007
PATENT & TRADEMARK OFFICE

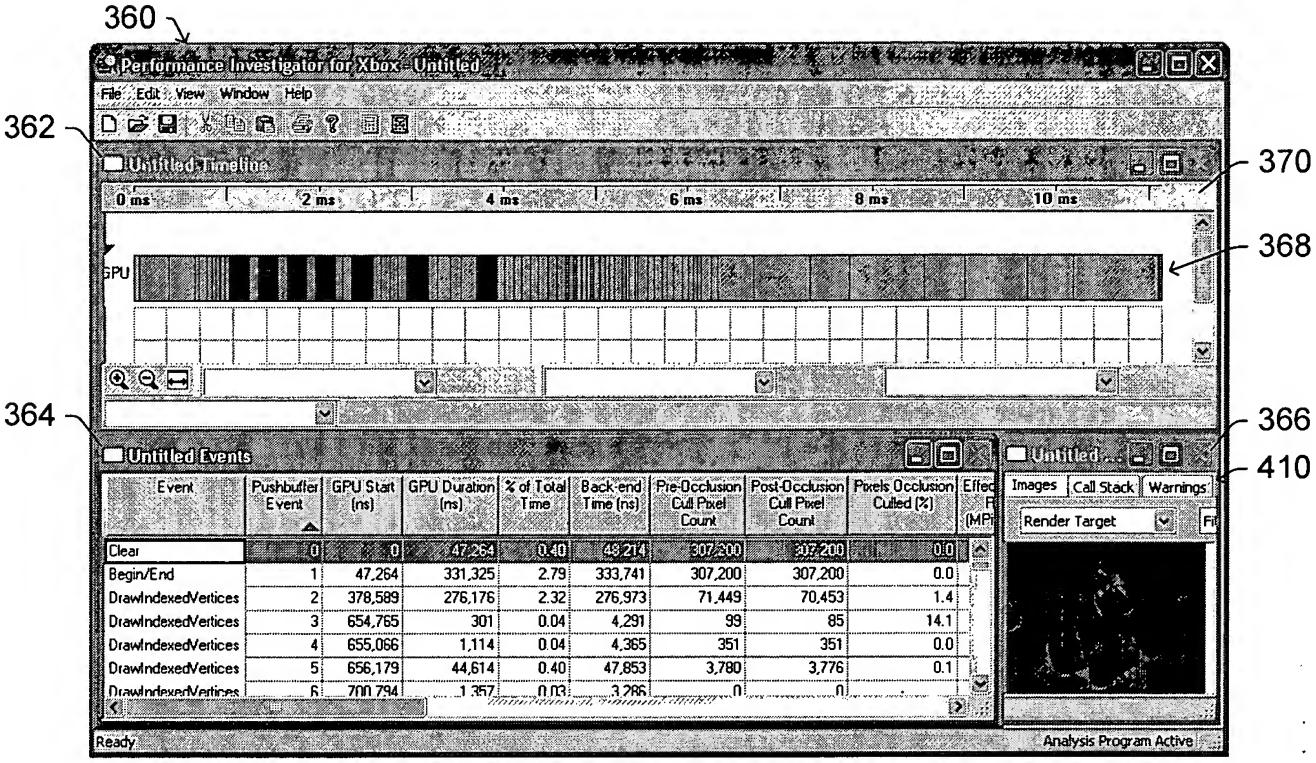

Fig. 7

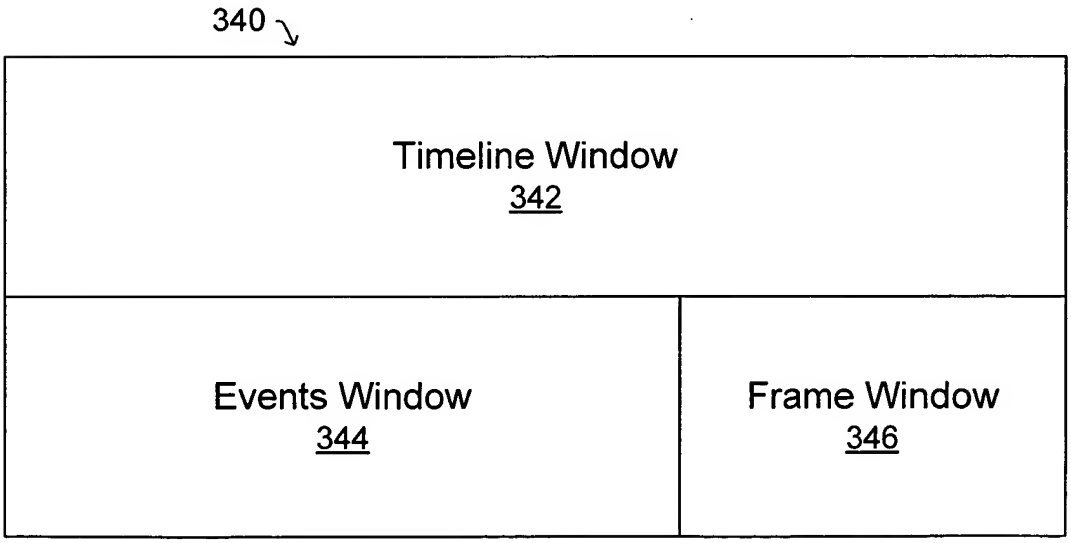

Fig. 6

OIPE JC699
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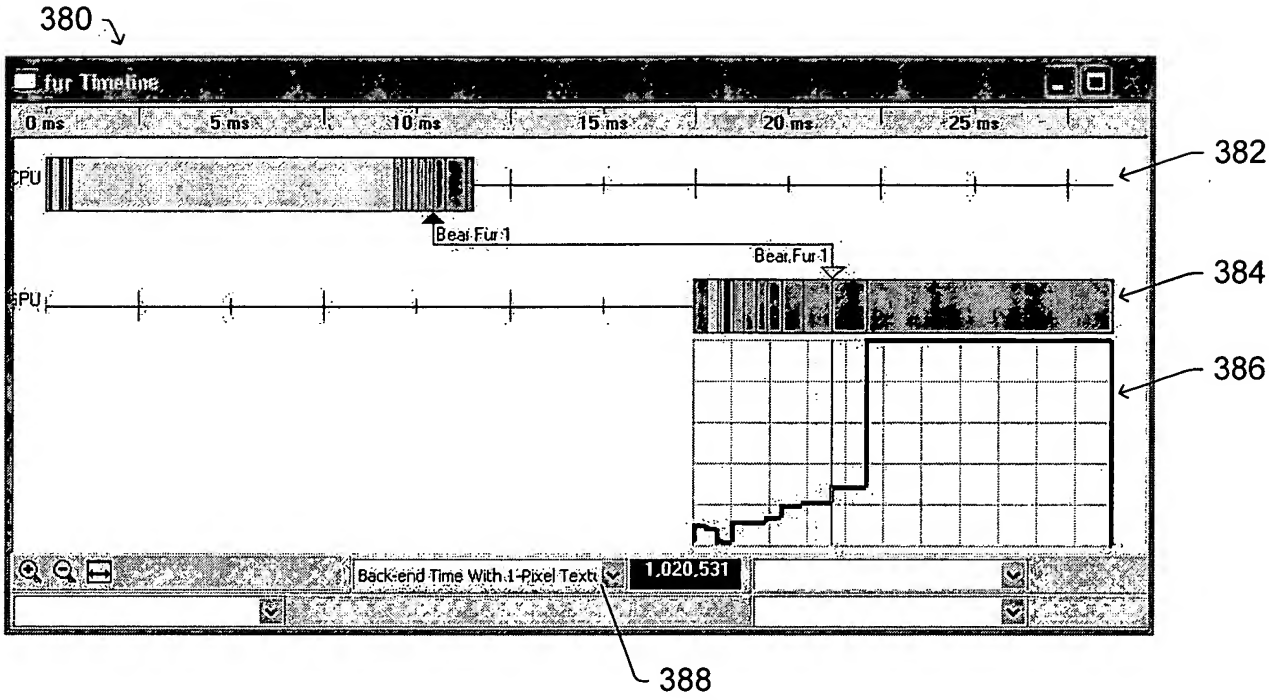

Fig. 8

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400

fur Events

Event	ID	CPU Start (ns)	CPU Duration (ns)	GPU Start (ns)	GPU Duration (ns)	% of Total Time	Back-end Time (ns)	Setup Time (ns)
KickPushBuffer	0	0	14,449	-	-	-	-	-
FrameMove	1	36,612	101,750	-	0	-	-	-
Clear	3	144,537	4,698	15,745,863	48,640	-	-	-
Begin/End	4	181,781	29,929	15,794,503	331,584	-	-	-
Bear Mesh 0								
DrawIndexedVertices	6	252,563	125,782	16,126,087	278,176	-	-	-
KickPushBuffer	7	339,091	5,501	-	-	-	-	-
KickPushBuffer	8	374,790	3,385	-	-	-	-	-
DrawIndexedVertices	9	386,209	10,399	16,404,263	3,072	-	-	-
DrawIndexedVertices	10	401,332	6,393	16,407,335	2,656	-	-	-
Bear Mesh 1	11	409,555	56,960	16,409,991	45,568	-	-	-
Bear Mesh 2	15	466,773	39,522	16,455,559	74,208	-	-	-
Bear Mesh 3	19	506,536	91,996	16,529,767	59,072	-	-	-
Bear Mesh 4	25	598,778	53,437	16,588,839	47,232	-	-	-
Bear Mesh 5	29	652,769	39,348	16,636,071	47,552	-	-	-
Bear Mesh 6	33	692,356	37,207	16,683,623	45,248	-	-	-
Bear Mesh 7	37	729,799	92,051	16,728,871	50,783	-	-	-
Bear Fur 7								
DrawFins	44	852,610	122,595	16,779,656	156,932	-	-	-
DrawShells	73	975,455	40,536	16,936,616	61,407	-	-	-
Bear Fur 6	75	1,019,798	117,933	16,998,024	219,011	-	-	-
Bear Fur 5	107	1,138,001	7,341,552	17,217,064	224,739	-	-	-
Bear Fur 4	142	8,479,990	164,020	17,441,832	284,642	-	-	-

Fig. 9

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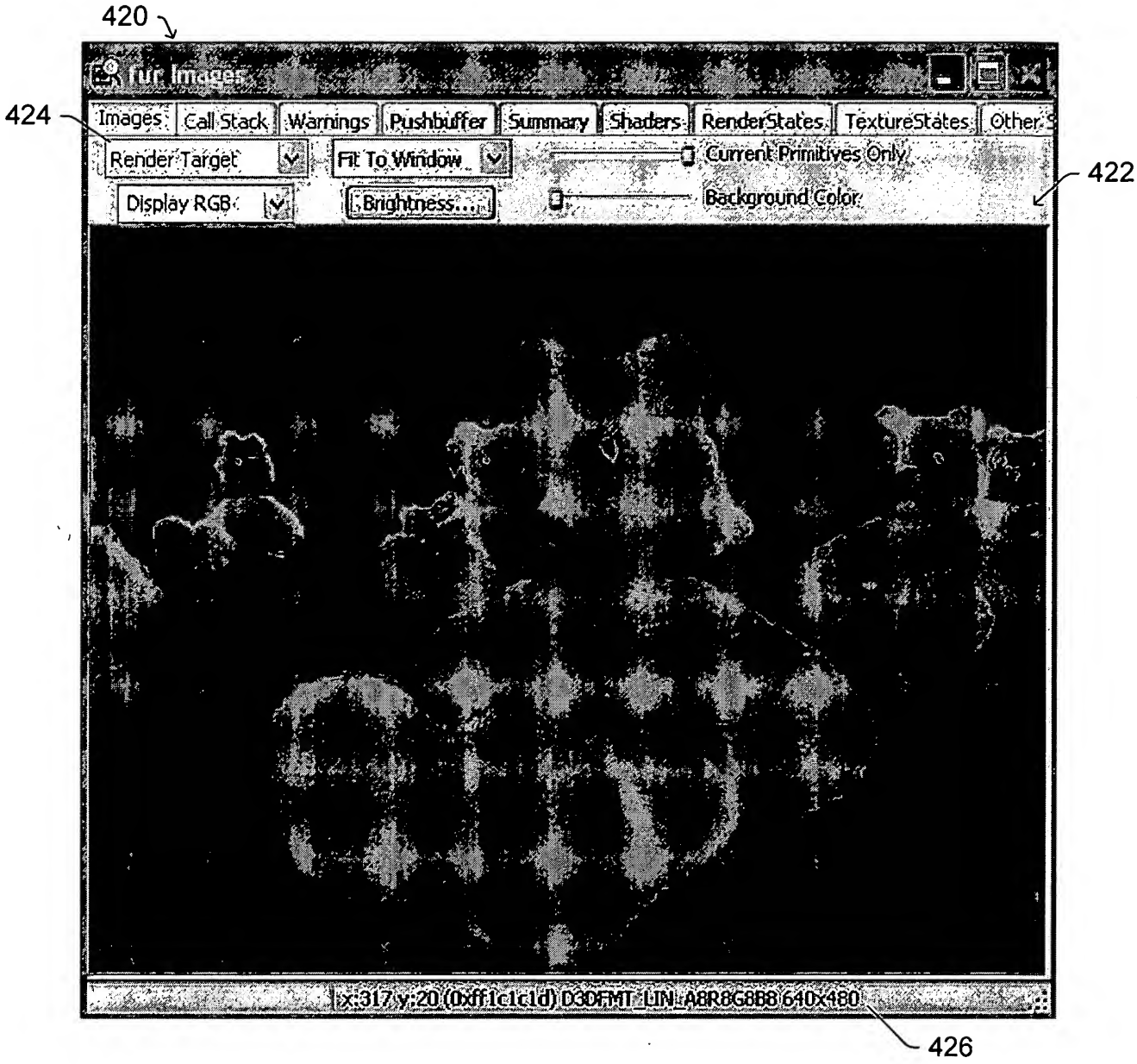

Fig. 10

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420

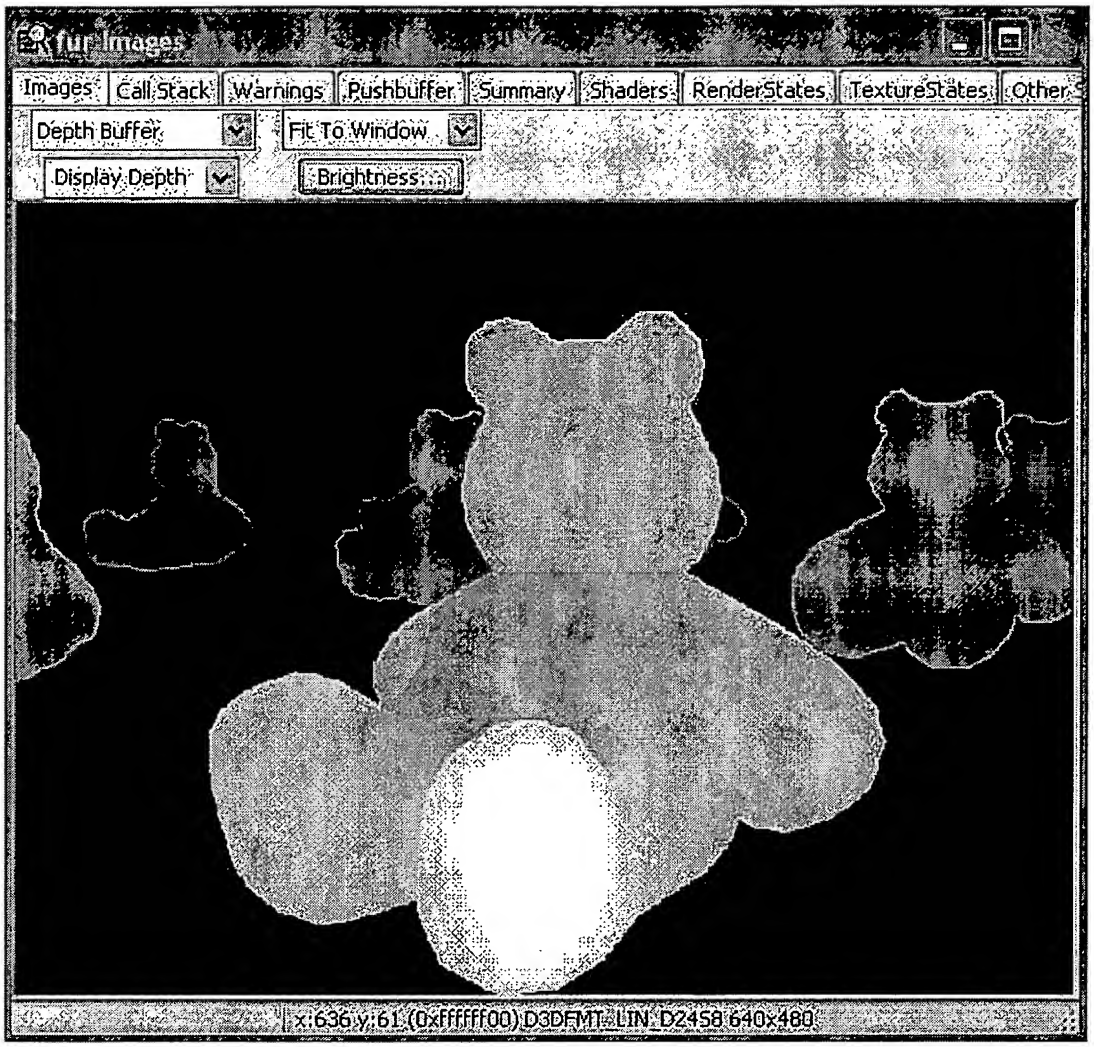

Fig. 11

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420

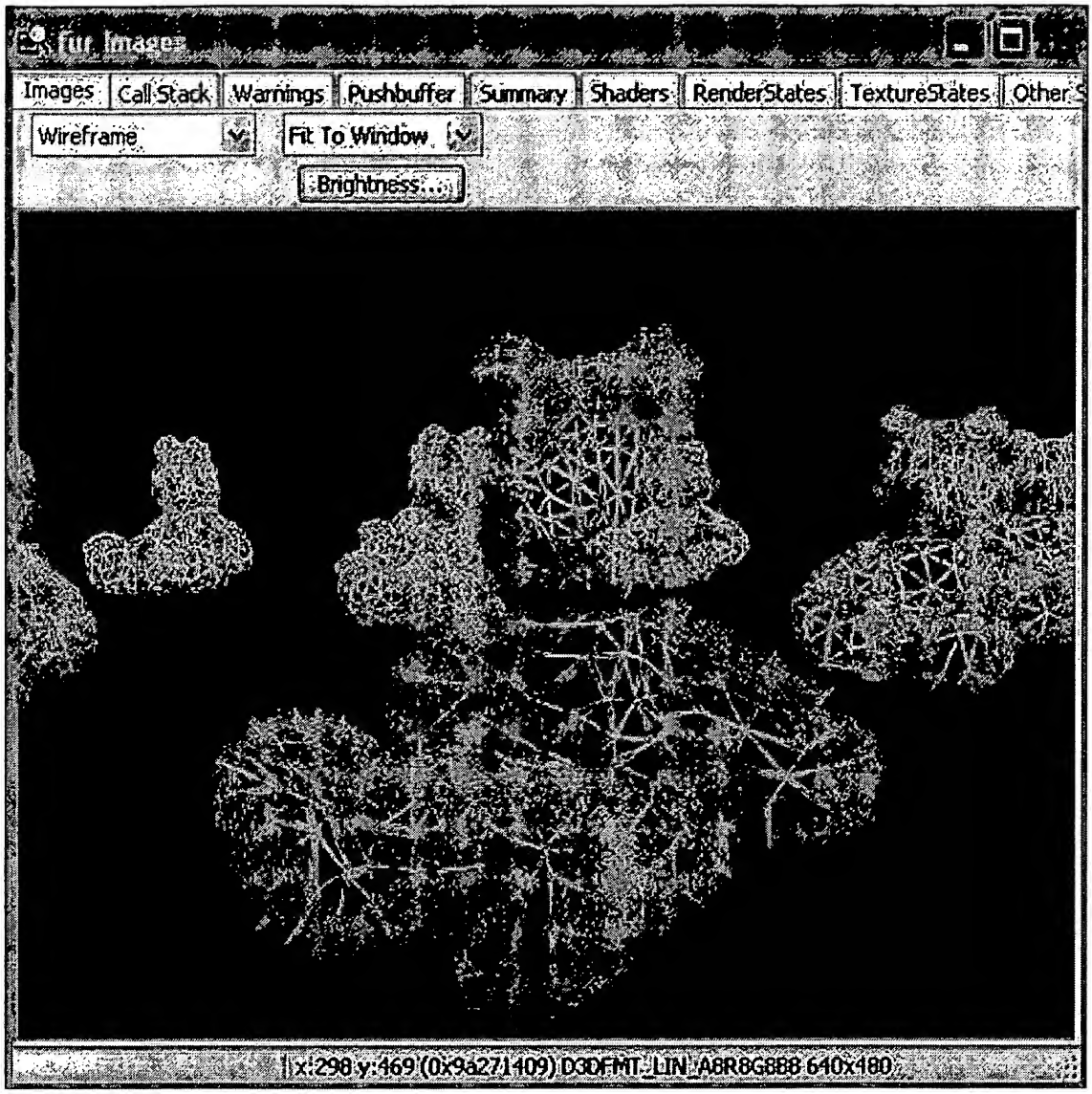

Fig. 12

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FEB 19 200
PATENT & TRADEMARK OFFICE

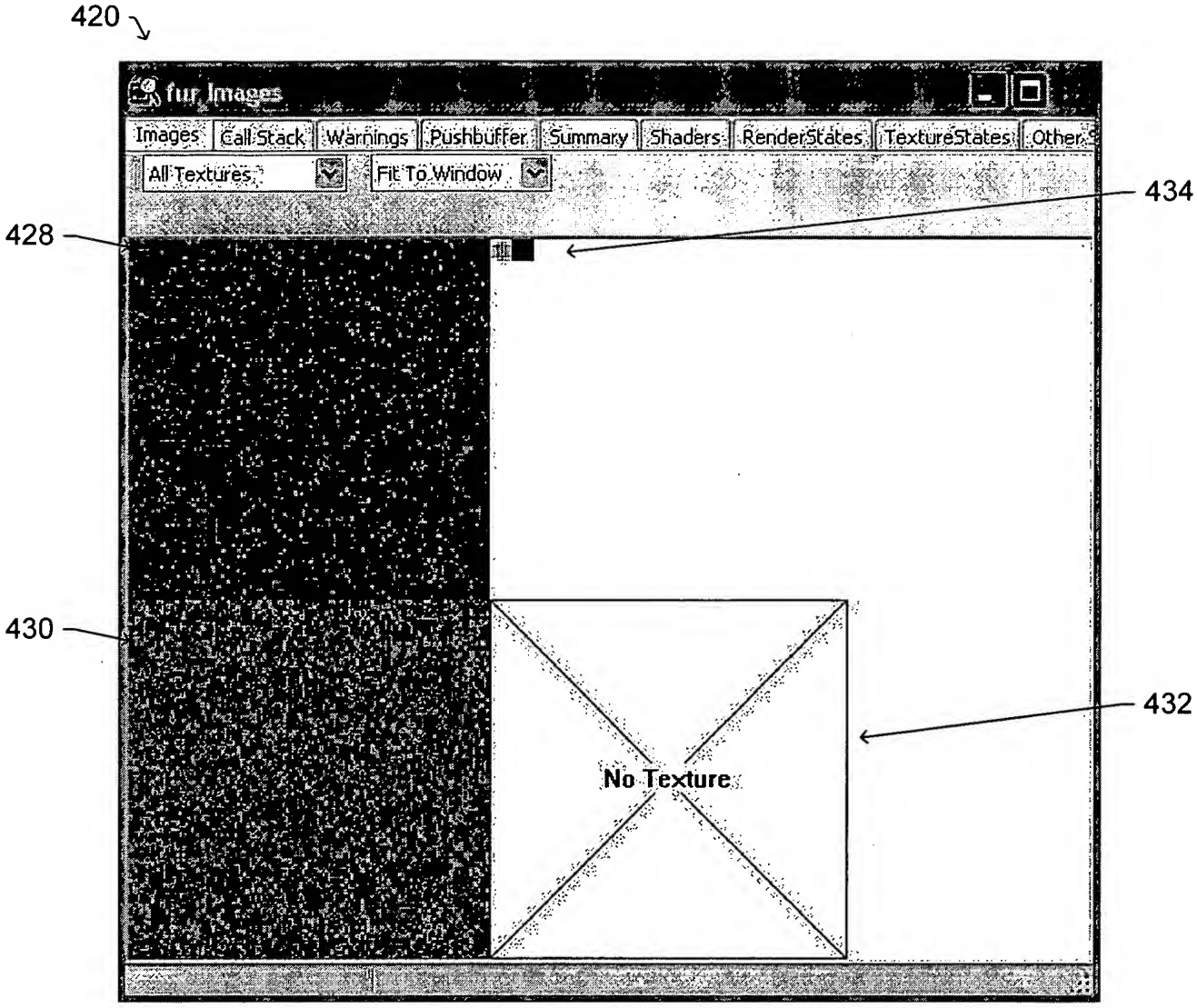

Fig. 13

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PATENT & TRADEMARK OFFICE

420

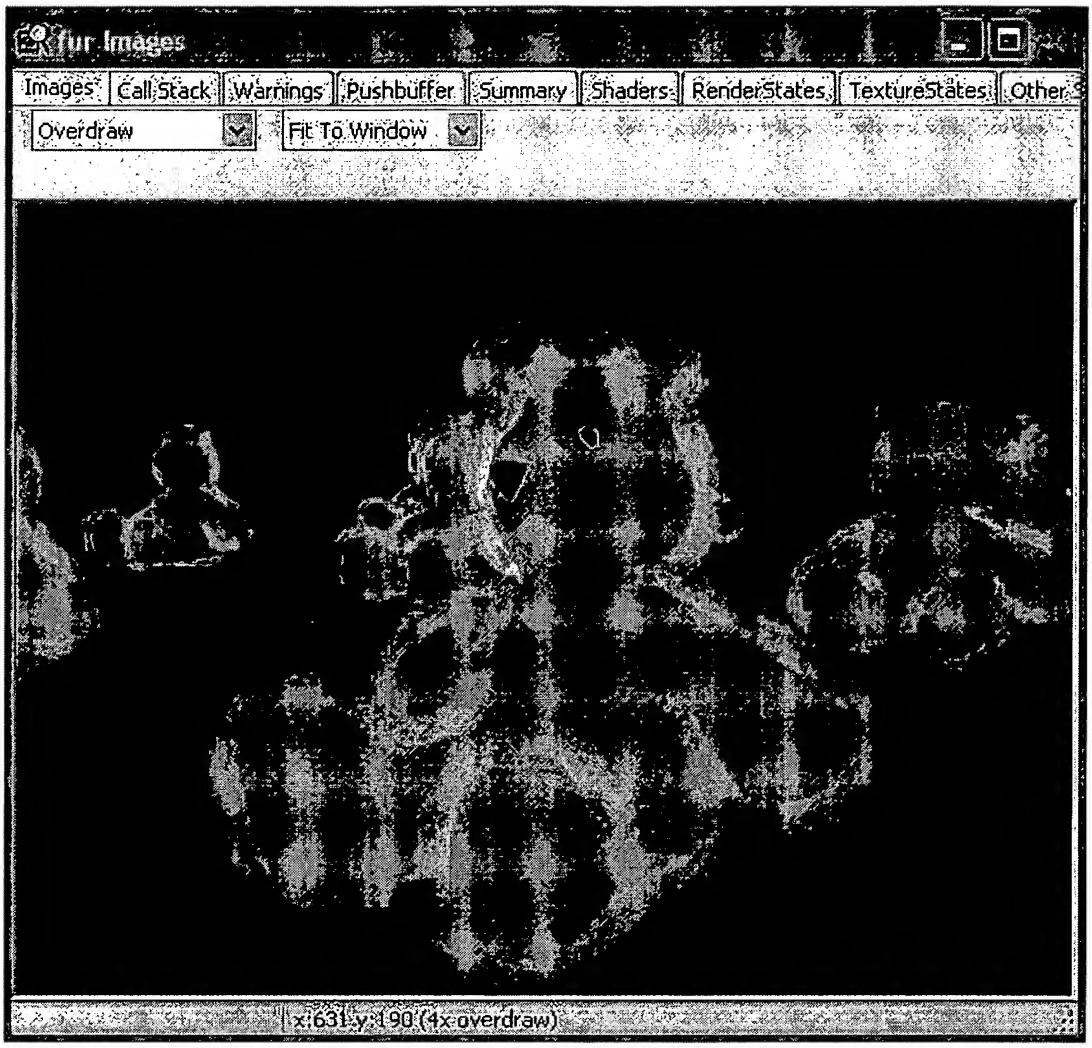

Fig. 14

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420

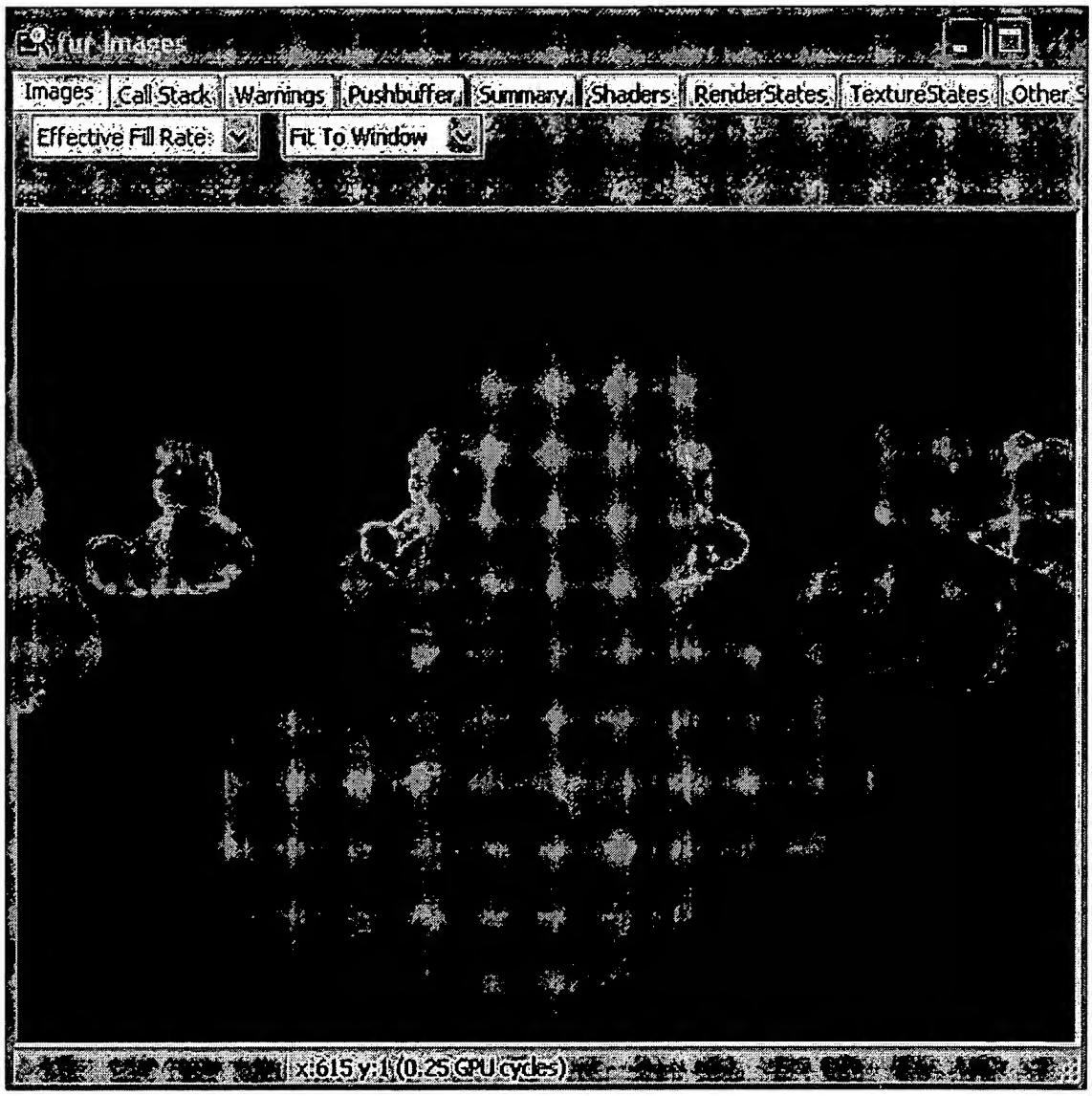

Fig. 15

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452

Pushbuffer Stack Trace

Images | Call Stack | Warnings | Pushbuffer | Summary | Shaders | RenderStates | TextureStates | Other State

Path to Symbol File: c:\xboxbins\dump | Browse | Resolve Symbols

Event	Symbol	Line	File
BlockOnObject	D3D::BlockOnTime	537	c:\xbox\private\windows\directx\dxg\d3d8\se\pusher.cpp
	D3D::BlockOnNonSurfaceResource	1287	c:\xbox\private\windows\directx\dxg\d3d8\se\pusher.cpp
	D3DFixup_Reset	1857	c:\xbox\private\windows\directx\dxg\d3d8\se\pushres.cpp
	CXBoxSample::FrameMove	363	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	CXBApplication::Run	294	c:\xbox\private\atg\samples\common\src\xbapp.cpp
	main	108	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	mainXapiStartup	54	c:\xbox\private\ntos\xapi\dll\xapi0.c
Clear	D3DDevice_Clear	74	c:\xbox\private\windows\directx\dxg\d3d8\se\clear.cpp
	CXBoxSample::Render	383	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	main	108	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	mainXapiStartup	54	c:\xbox\private\ntos\xapi\dll\xapi0.c
RunPushBuffer	D3DDevice_RunPushBuffer	122	c:\xbox\private\windows\directx\dxg\d3d8\se\pushres.cpp
	CXBoxSample::Render	386	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	main	108	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	mainXapiStartup	54	c:\xbox\private\ntos\xapi\dll\xapi0.c
DrawVerticesUP			
DrawVertices			
Begin/End	D3DDevice_Begin	1196	c:\xbox\private\windows\directx\dxg\d3d8\se\drawprim.cpp
	CXBFont::Begin	448	c:\xbox\private\atg\samples\common\src\xbfont.cpp
	CXBoxSample::Render	387	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	main	108	c:\xbox\private\atg\samples\graphics\pushbuffer\pushbuffer.cpp
	mainXapiStartup	54	c:\xbox\private\ntos\xapi\dll\xapi0.c

Fig. 16

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460

462

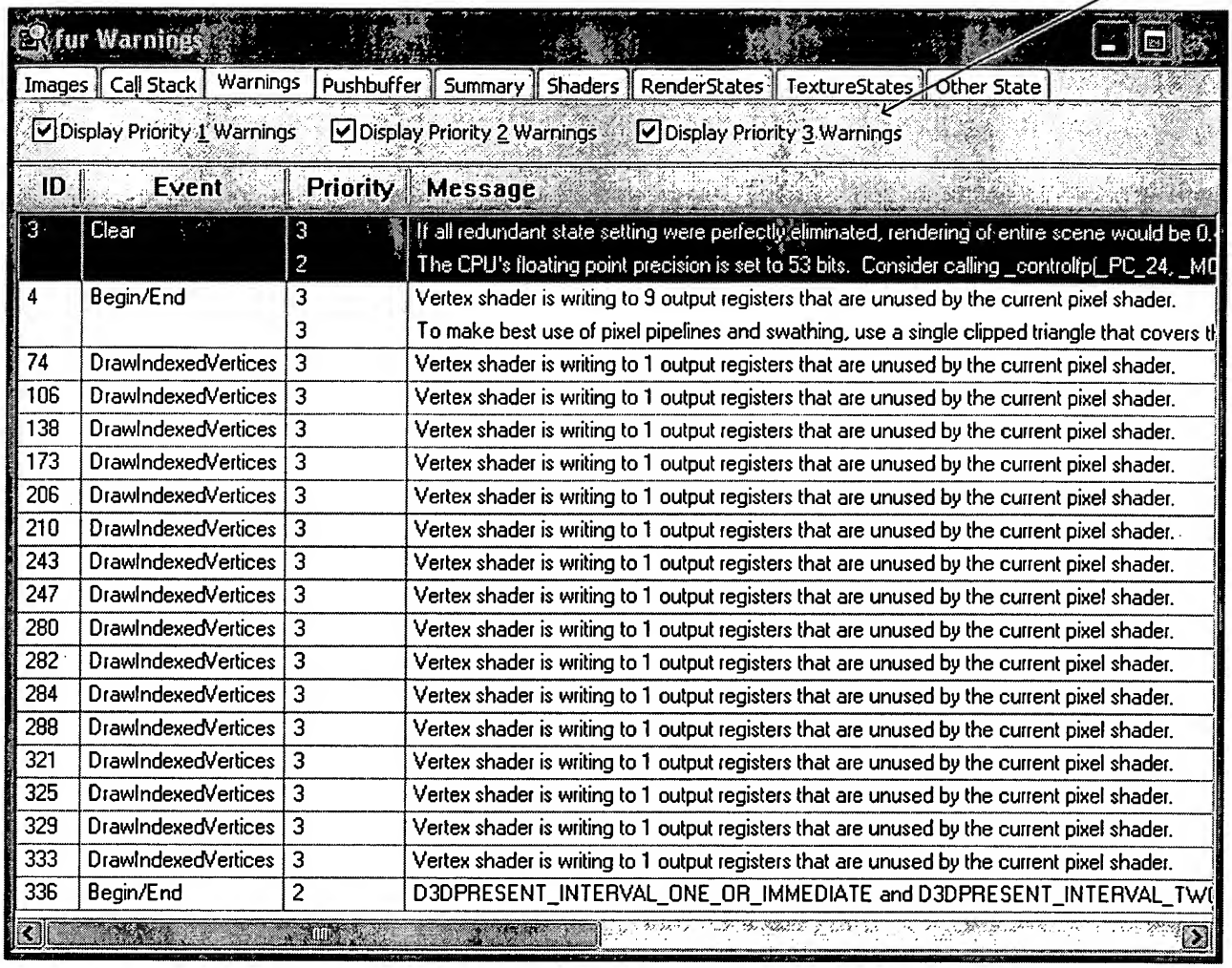

Fig. 17

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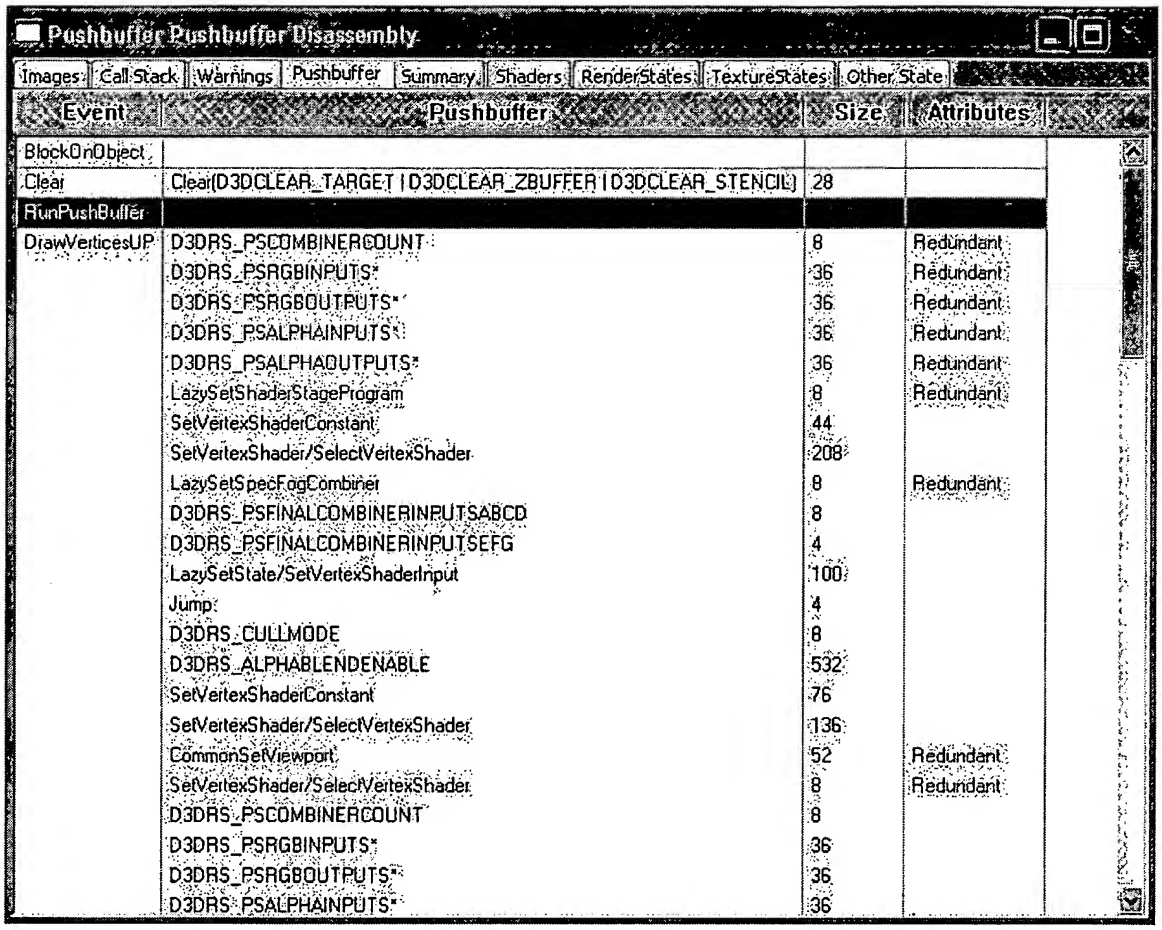

Event	Pushbuffer	Size	Attributes
BlockOnObject			
Clear	Clear(D3DCLEAR_TARGET | D3DCLEAR_ZBUFFER | D3DCLEAR_STENCIL)	28	
RunPushBuffer			
DrawVerticesUP	D3DRS_PSCOMBINERCOUNT	8	Redundant
	D3DRS_PSRGBINPUTS*	36	Redundant
	D3DRS_PSRGBOUTPUTS*	36	Redundant
	D3DRS_PSALPHAINPUTS*	36	Redundant
	D3DRS_PSALPHAOUTPUTS*	36	Redundant
	LazySetShaderStageProgram	8	Redundant
	SetVertexShaderConstant	44	
	SetVertexShader/SelectVertexShader	208	
	LazySetSpecFogCombiner	8	Redundant
	D3DRS_PSFINALCOMBINERINPUTSABCD	8	
	D3DRS_PSFINALCOMBINERINPUTSEFG	4	
	LazySetState/SetVertexShaderInput	100	
	Jump	4	
	D3DRS_CULLMODE	8	
	D3DRS_ALPHABLENDENABLE	532	
	SetVertexShaderConstant	76	
	SetVertexShader/SelectVertexShader	136	
	CommonSetViewport	52	Redundant
	SetVertexShader/SelectVertexShader	8	Redundant
	D3DRS_PSCOMBINERCOUNT	8	
	D3DRS_PSRGBINPUTS*	36	
	D3DRS_PSRGBOUTPUTS*	36	
	D3DRS_PSALPHAINPUTS*	36	

Fig. 18

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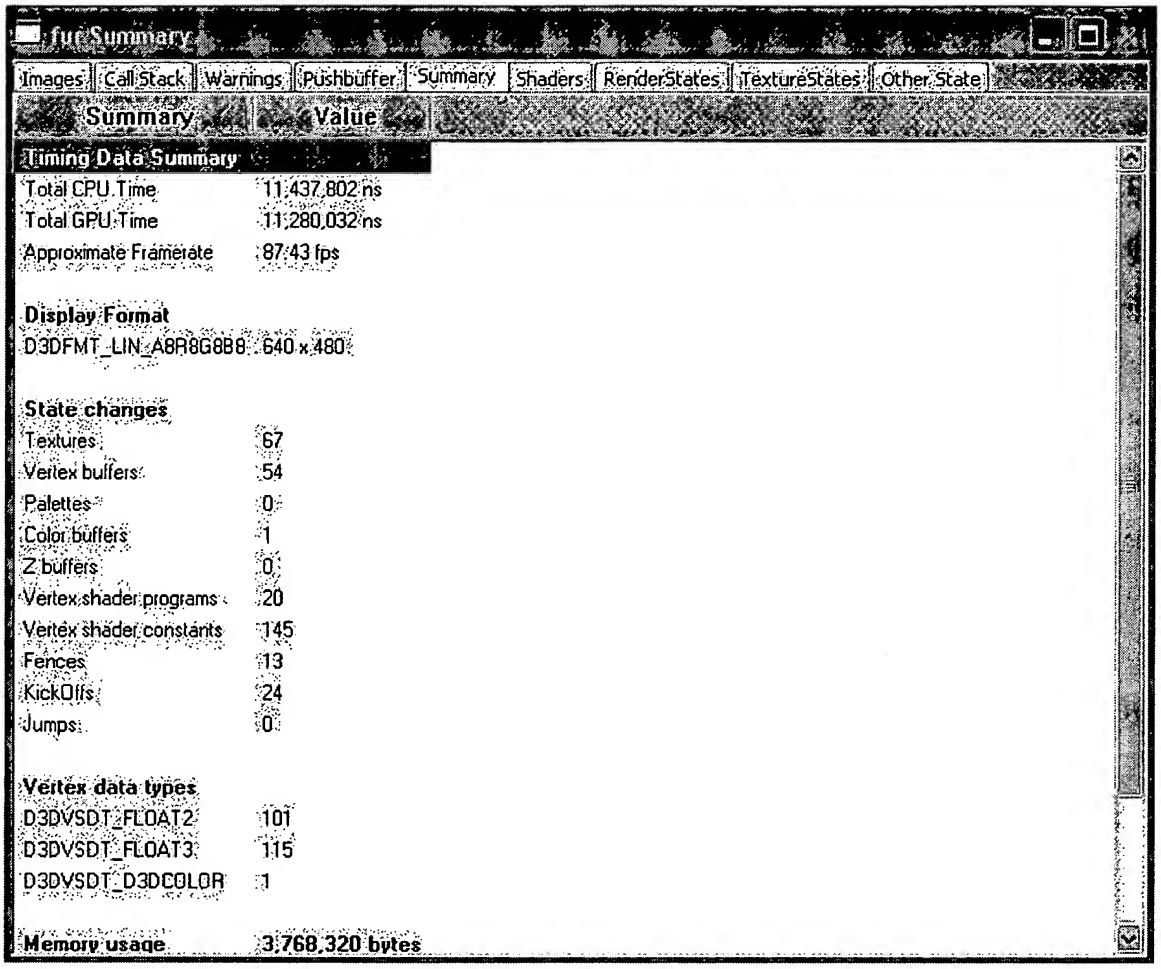

Fig. 19

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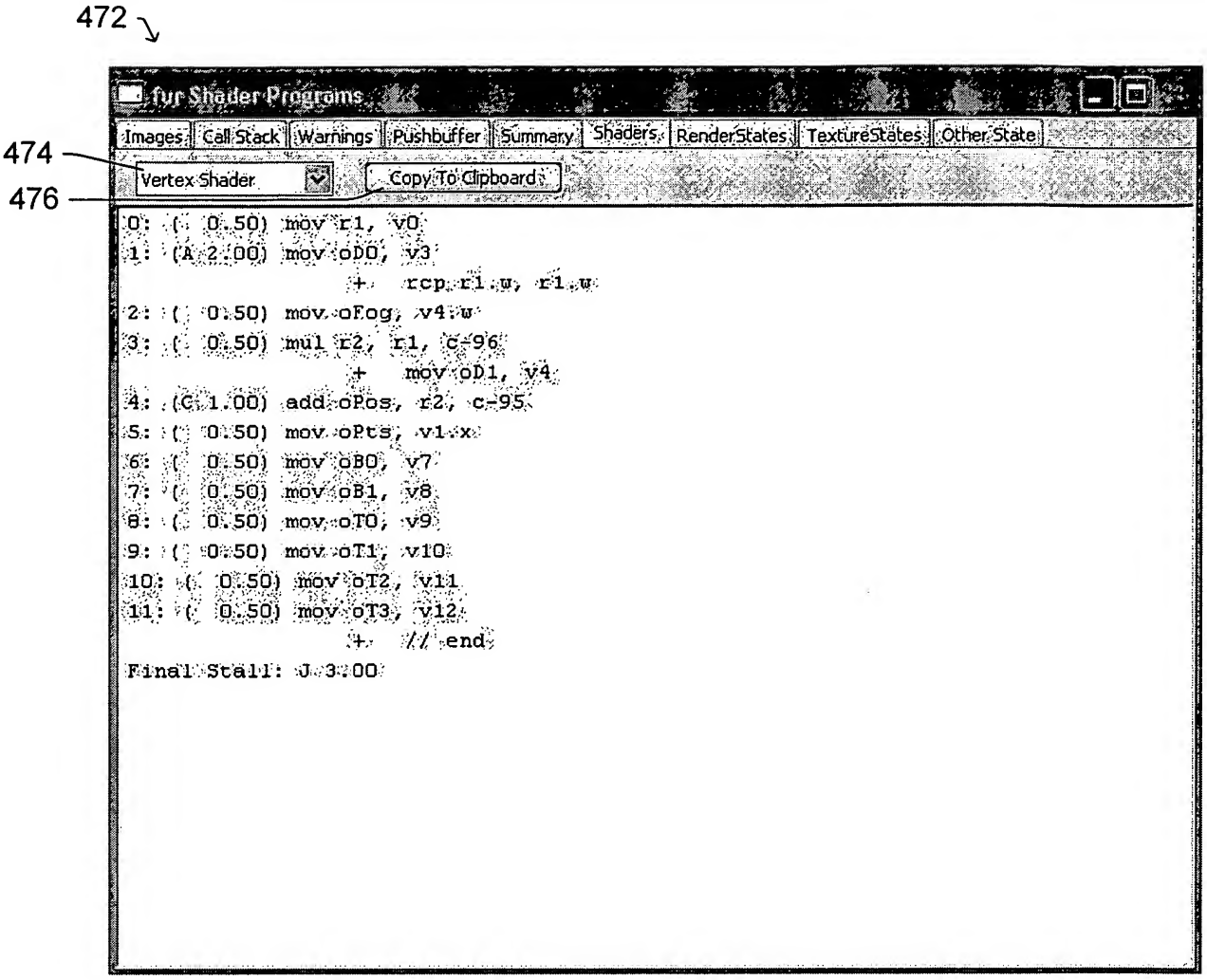

Fig. 20

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480

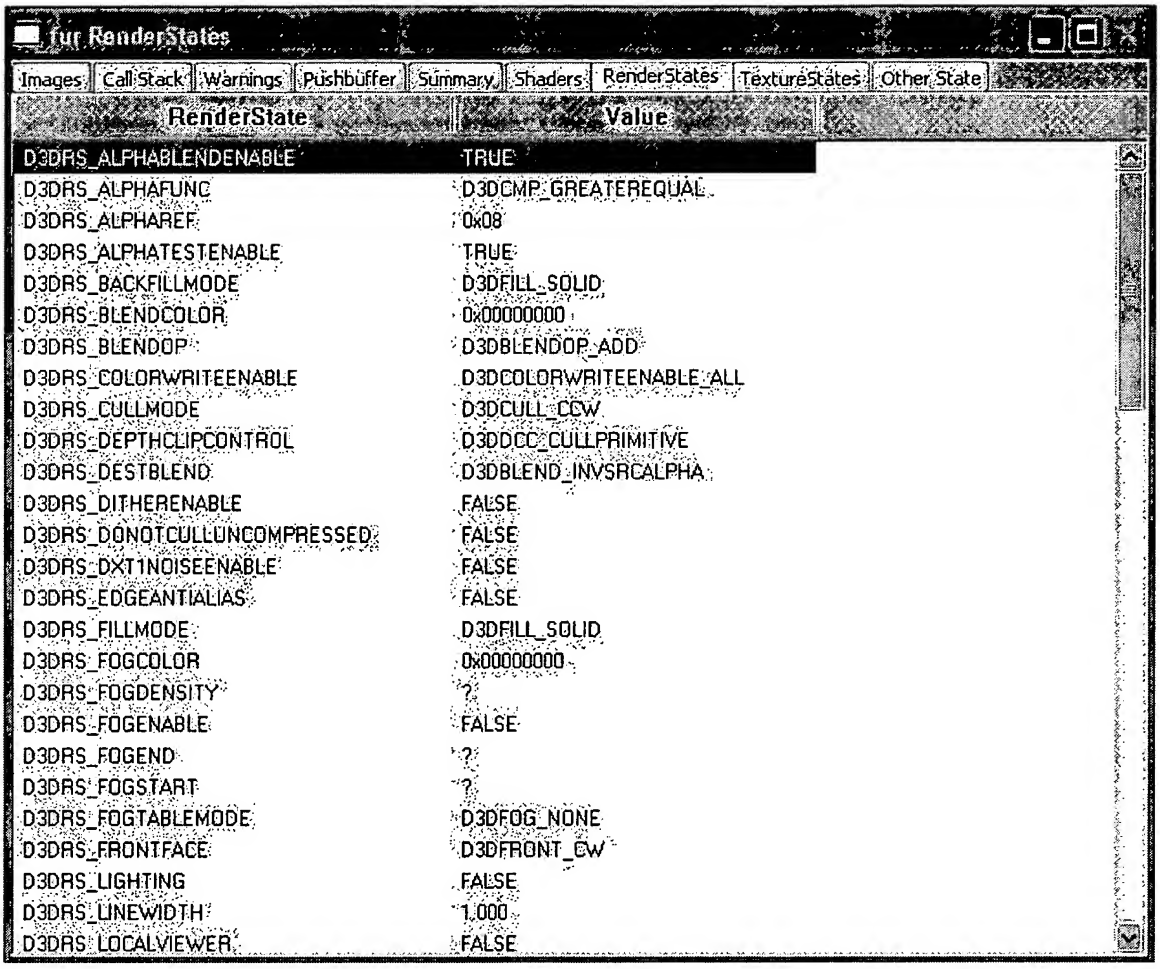

Fig. 21

FEB 19 2004
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484

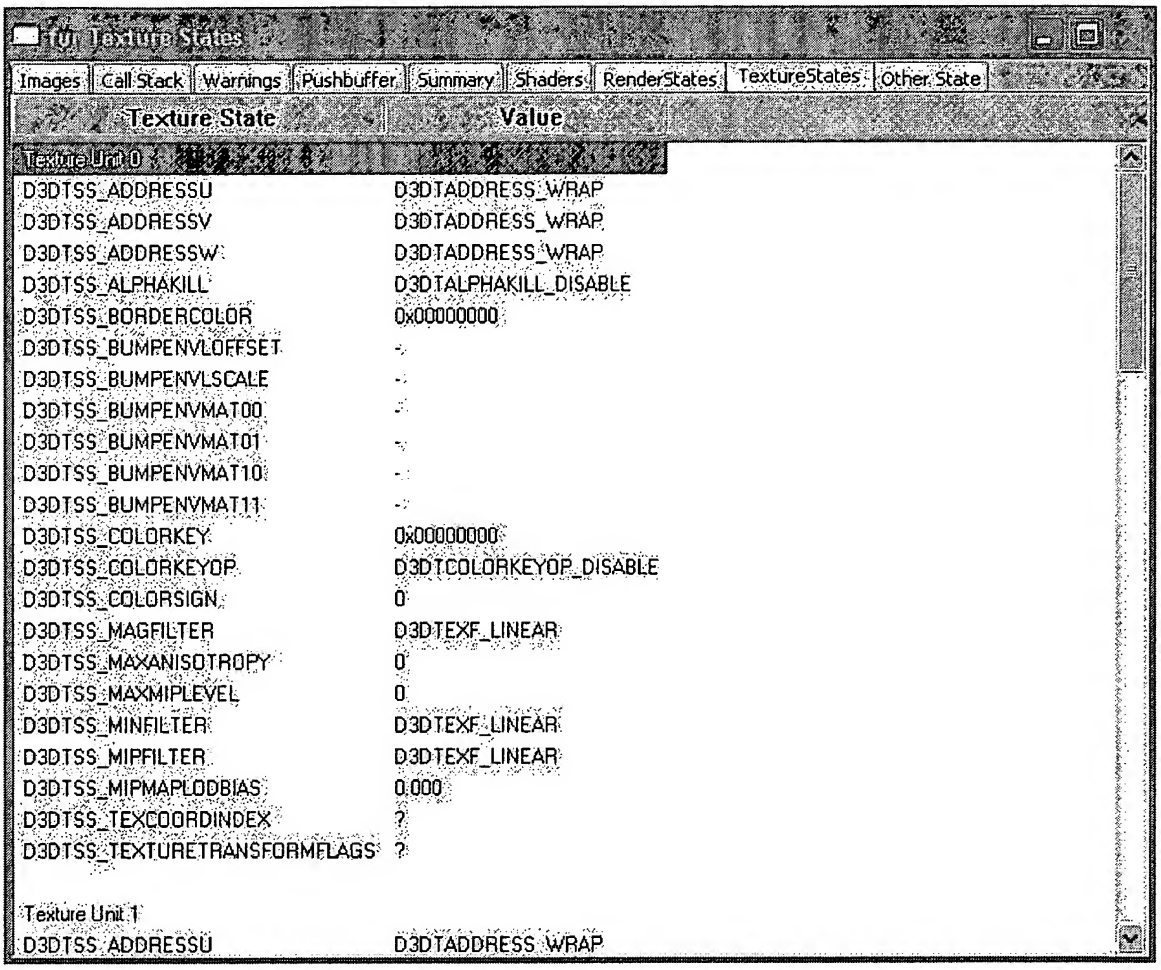

Fig. 22

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488

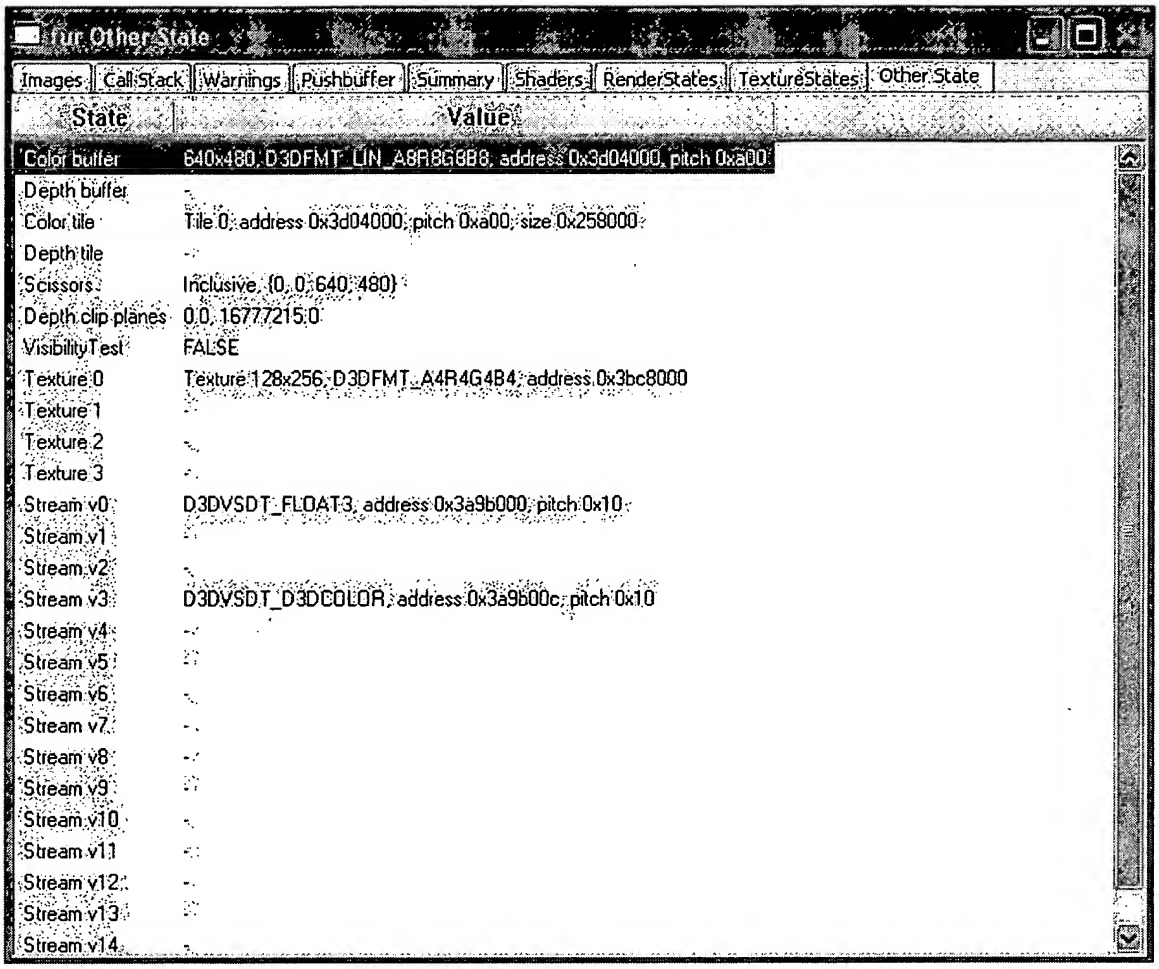

Fig. 23

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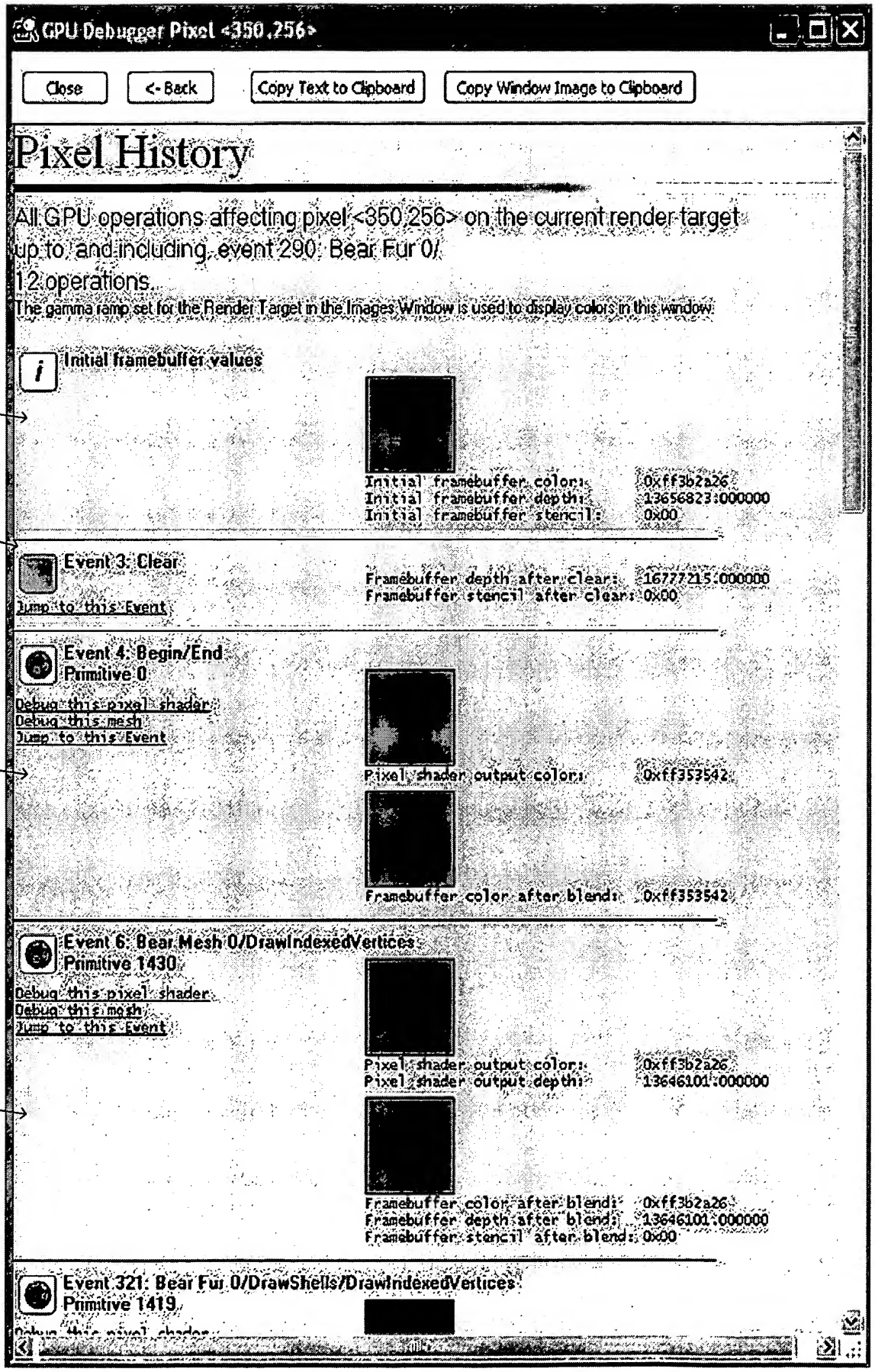
500



502

504

506

506

Fig. 24

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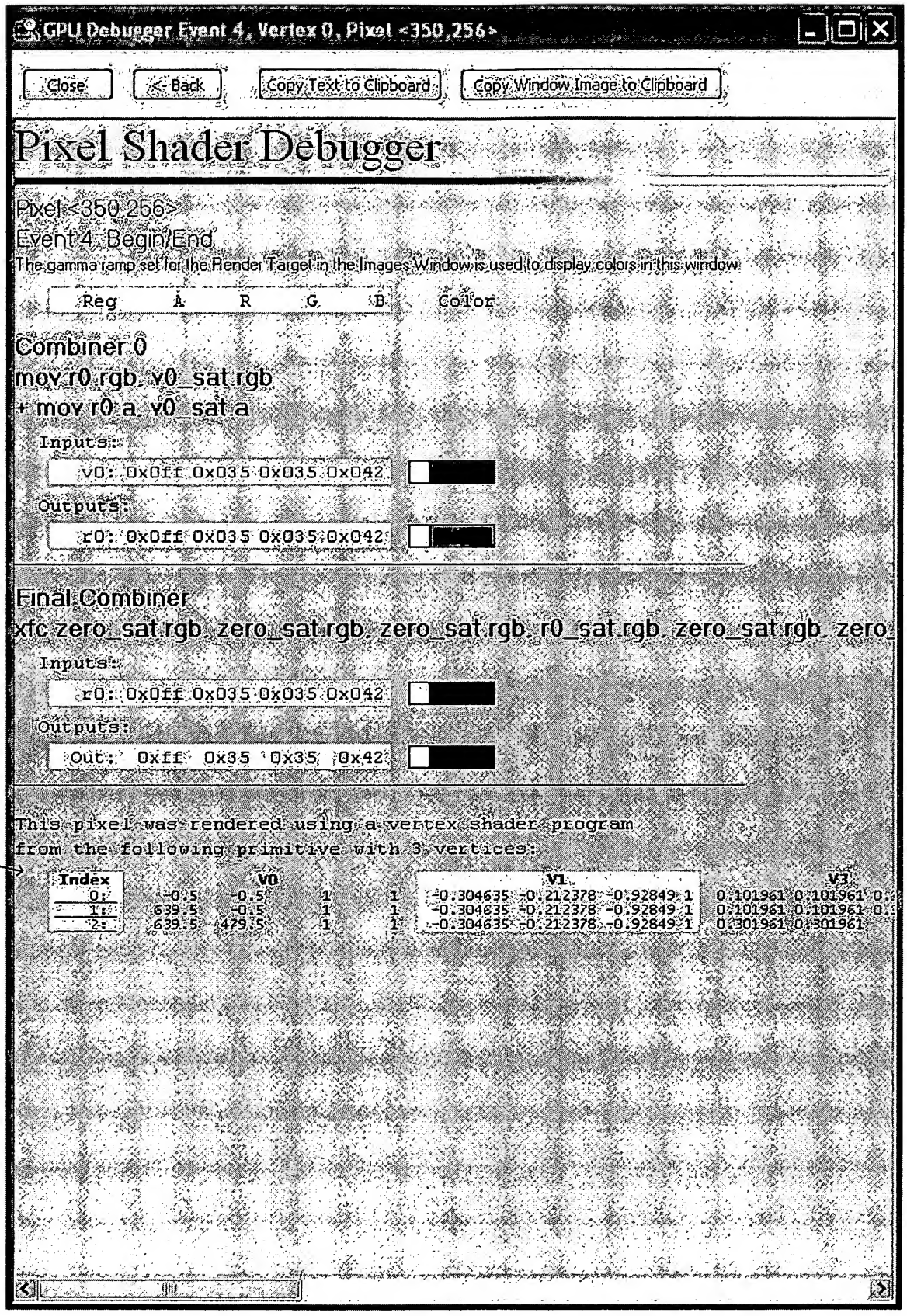
520



522

Fig. 25

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540

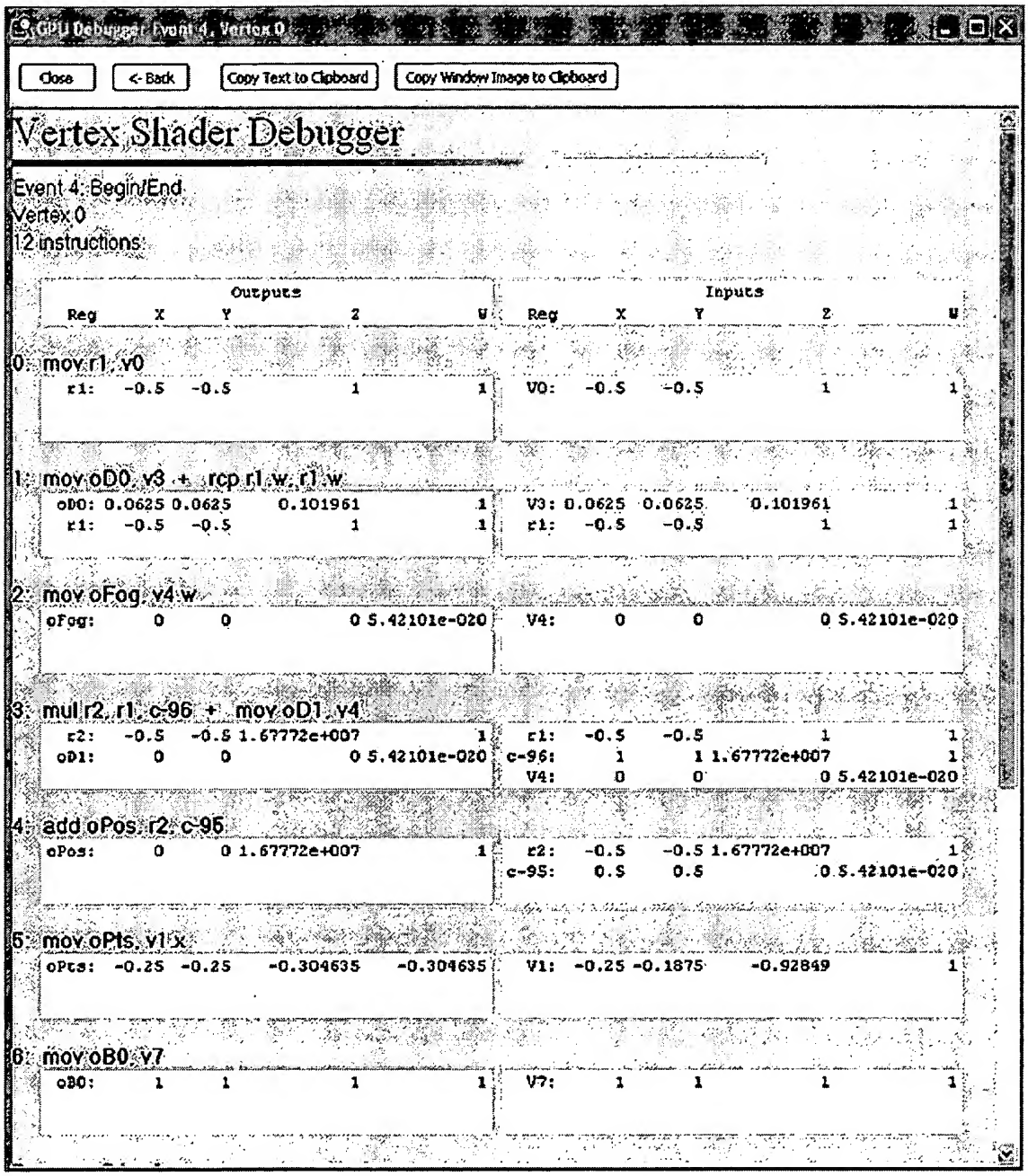

Fig. 26

FEB 19 20[illegible]
PATENT & TRADEMARK OFFICE

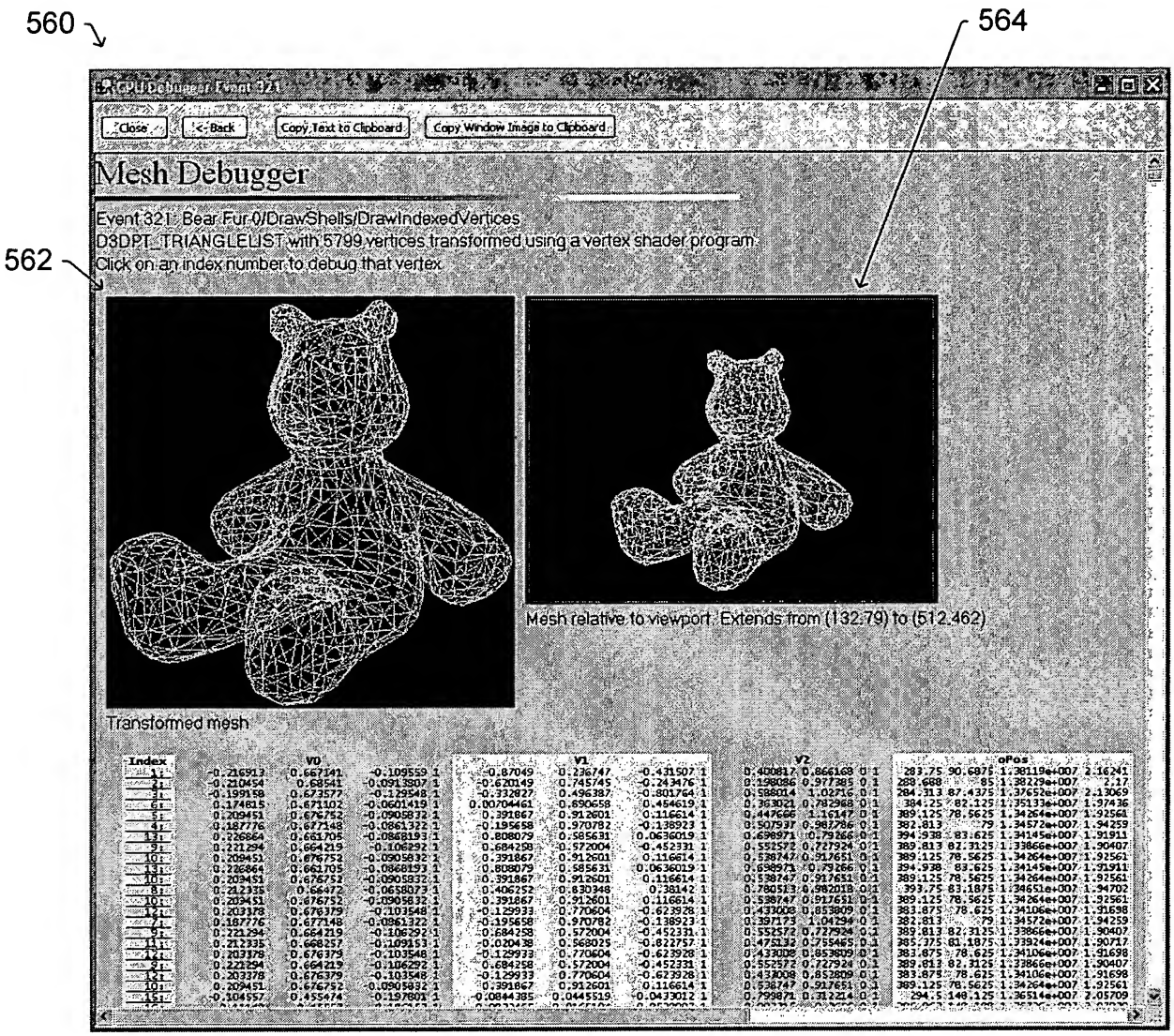

Fig. 27

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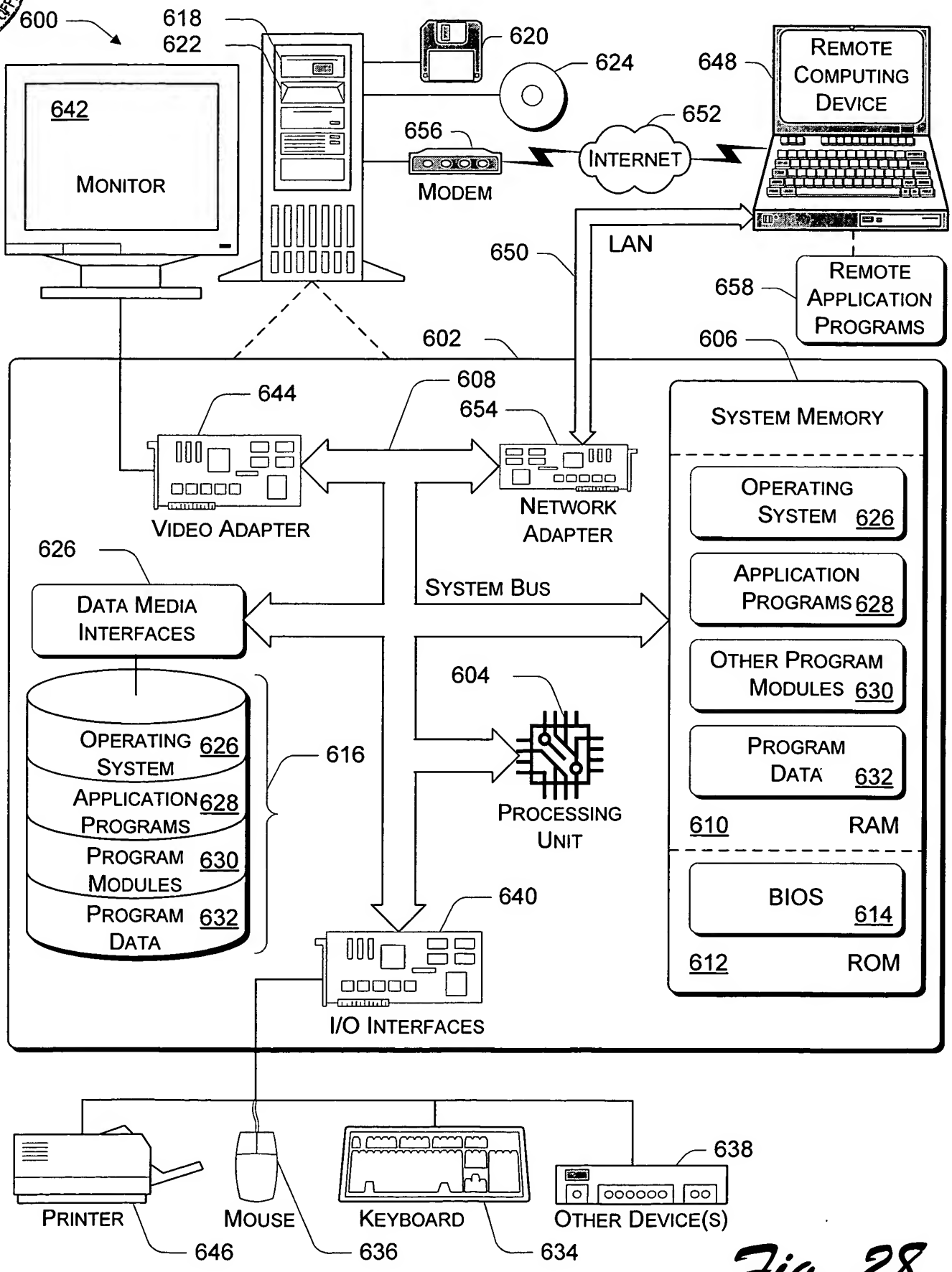

Fig. 28